

## **ABSTRACT OF THE DISCLOSURE**

Fuel properties estimating apparatus for an internal combustion engine includes a controller to determine an estimated component concentration of a component in a fuel.

- 5 The controller calculates an air-fuel correction quantity in accordance with an actual air fuel ratio of the engine; and calculates an air-fuel ratio sensitivity correction quantity from the air-fuel ratio correction quantity and a fuel properties correction quantity calculated from a most recent value of the
- 10 component concentration. The controller then determines a new value of the estimated component concentration in accordance with the air-fuel ratio sensitivity correction quantity.